

MAN -143-003-B GPRS 4-20mA Transient logger Part number RDL976/x/x Series

Version 1.1



Warning: This manual contains important safety and operating information. Please read, understand and follow the instructions in the manual.

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Introduction

Thank you for choosing an HWM data logger(s), we trust it will provide you with many years of service.

The individual configuration of your logger(s) may differ slightly from the detailed descriptions that follow, but any additional setup information that you need, can easily be obtained from our customer support team.

Unpacking

As you unpack your new logger, please confirm that you have the following parts required to install the equipment. If there are any omissions, please contact our sales team to rectify or supply the missing parts.

- Pressure Transient logger
- Communications cable
- HWM IDTV Software (also available at <u>www.hwm-water.com</u>)

Please dispose of your waste packaging responsibly.

Before proceeding to site for physical installation, please take the time to configure your logger in an office environment. Most settings can be configured before visiting site and this will save time at the point of install, especially if the weather is bad.

You will need to have:-

an

A PC with Windows 7/8 installed (IDT also supports Windows XP & Vista) A description and reference number for the installation site:

The reference number is split into a Zone and Location format to allow for grouping of individual "Locations" into larger regions or "Zones". The format of the number is configured during the initial installation of the software but essentially is a 7 character code, e.g. AB123CD

Installing the software

- 1. Insert the CD-ROM supplied into your CD drive.
 - (If your PC does not have a CD drive, then either copy the files from the CD-ROM onto a memory stick, or download and run the installation file from the HWM website at <u>www.hwm-water.com</u>)

NOTE: If you use proprietary archiving software, such as WinZip or 7zip, please ensure that you extract the files to a temporary folder using the automatic extraction buttons that maintain the original folder structure.

- 2. Ensure you have system administration rights for your computer, ask your IT department if you are unsure.
- 3. Locate the two files "setup IDT.msi" (in the IDT folder), which installs the program and "setup driver.bat" (in the Driver folder) which installs the necessary USB drivers for the logger.
- 4. Double click the "setup IDT.msi" file and click <<Next>> when you see the screen below

| al es | 1111 |
|--|------------------------------------|
| Welcome to the IDT Setup Wizard | 5 |
| The entitle of gade yes though the rings reasond is result (17 a | r yeur composite |
| WMENHIES. This company argums is potentially copyright have an Uncertaintial displayation in distribution of the program is explanation or oriented penaltics, and will be provinceded to the manipum entering | real is store stead to prove south |
| text | int detail |

- 5. Follow the on screen installation instructions to complete the install of the IDT.
- 6. To install the USB drivers double click the "setup driver.bat" file identified in step 3. If you see the unzipping message below, click "Extract all" to extract the files to a folder first, then try again.

| Comp | ressed (| zipped) H | aiders Warn | ring 🛔 |
|------|----------|-------------|--------------------|---------------------------------|
| 1 | For the | his folder. | - Min property, it | er compressed is recommended |
| | | shart all | But | Canal |

7. Follow the on screen instructions and the drivers will install automatically. Should the automatic installation fail, please check with your system administrator that you have sufficient rights to install the driver or try installing the drivers manually.

You may be required to update Microsoft .Net; the install file is included with the IDT setup files for your convenience.



Important: As the logger is not powered from the PC directly, to preserve battery, the logger will automatically disconnect from the PC and shutdown if there has been no activity for **10mins**. If you try to communicate with the logger after this time, a message "Connect/Re-connect logger!" will appear. Simply unplug the USB plug from your computer, wait for 2 seconds and then reconnect. This will wake up the logger again.

(i)



4. The IDT will now download the current settings from the logger.

At this point the IDT will check to see if there is a more up-to-date version of the logger firmware available on your PC, if so, you will see the message "Update Available". Click <<Yes>> to update the logger, the process will take approximately 2 minutes, however the logger will be restarted so you may wish to transfer any logged data first, in which case click <<No>>.

The IDT checks the firmware version each time you read it.



5. Once all the settings have been loaded you will see this message, Click <<OK>> to start configuring your logger.

| | X |
|-------------|---------|
| Logger Read | Success |
| C | ОК |
| - | |

| detailed explanation follows in 2.): | ured in sections for easy setup(:- |
|--|---|
| i) Logger Details including logger ID; SIM card phone number current logger time and current logger status (Recording or Waiting to Record or Stopped) Note – 'Waiting to record' means the recording will not start until the next sample period boundary. | HWM IDT (Installer mode) V1.00.34 – × File Tools Options Help + Setup Data Collection Hardware Tests Calibration Pressure 1 + Unilog on COM6 Logger Type FW-138-002 V2.31 (Recording) ID COMLGPT Serial No 0000200 Tel No +447860769600 logger time 24/10/2014 12:23:10 |
| ii) Logger start time, data capture interval and sample interval | Logging Parameters Start Time 23/10/2014 Log Interval 24 Hours 00:01 00 € |
| iii) Logger channel configuration including 4mA and 20mA configuration settings | Logging Channels Type Mode Offset or 4mA Scale or 20mA Ch1 4-20mA Ave 0.000 20000.000 Ch2 4-20mA Min 0.000 20000.000 Ch3 4-20mA Max 0.000 20000.000 |
| iv) Transient capture settings | Surge logging Sample Frequency 100 samples/second Transient Mode Record data at specific times Recording triggered on alarm event Continuous recording to SD and triggered on alarm Amount of data stored before each recording Seconds Uuration of each recording So seconds Erase previous recordings |
| v) Service provider settings for SIM Card | APN Use GPRS test to choose APN settings Let me choose APN settings |
| vi) Call settings for sending data to the host - | Time(s) Data is Sent Address Type Mode Time hh.mm Off ✓ UDP ✓ ✓ 01:00 全 |



- 2. Now you can enter the configuration you require for each section :
 - Logger enter the site ID that you wish for the logger, e.g. Postal/ZIP code of up to 7 alpha-numeric characters and the telephone number associated with the SIM card. If you ordered a SIM with the logger, this will have been programmed already for you, otherwise enter the number from your service provider in international format (e.g. +44...)
 - ii. Logging Parameters Accept the default start time or enter your own. Default start time is in the past so the logger will begin recording immediately. You can delay this start time by selecting one from the calendar or enter the time directly from your number keypad. Set your log interval if required – 15 mins is default. Sample interval for pressure channels is 30 secs by default – you cannot set a pressure channel below this but it can be greater than this if required.



Spot / State = not required for Pressure Transient logging

Example - for a pressure transient analysis you may want to set the primary channel to 'Avg' so that the channel 1 graph will show average pressure readings over the sample period; but you might then set Channel 2 to Max so that the graph for Channel 2 will show the maximum readings during the sample period. This will narrow down the data that needs to be examined for the transient situations. Other channels can be set to record other phenomenen



iv. Transient settings -

Select the transient sample setting you require from the drop down

Select the Transient mode option You require –

 Record data at specific times allows the transient event to be recorded for a selectable duration

| Sample Frequency | 100 samples/second v | | | | |
|---|----------------------|--|--|--|--|
| Transient Mode | | | | | |
| Record data at spe | cific times | | | | |
| Recording triggered | d on alarm event | | | | |
| Continuous recording to SD and triggered on alarm | | | | | |
| Amount of data stored b | efore each recording | | | | |
| | 5 seconds 🛛 🗸 | | | | |
| Duration of each record | ling 30 seconds ∨ | | | | |
| Erase previous rec | cordings | | | | |

- Recording triggered on alarm event allows the transient to be recorded for selectable durations before and after the event (you will need to set the alarm conditions- see section viii)
- Continuous recording to SD and triggered on alarm used if the logger is expected to be in use for a considerable time - average recordings will be made to the SD card and transient data triggered by the alarm will also be stored

Select the amount of data stored before each Transient and the duration of the transient recording as required.

v. **APN** – If you have ordered a data pack from HWM you can leave this setting alone (as below) as your logger will have been preconfigured by HWM.

APN

If you have ordered your data service & SIM card, then you will need to separately configure your

Use GPRS test to choose APN settings
 Use the following settings.

service. HWM recommends that you allow the GPRS test utility to search for these settings automatically, however if you wish to enter them manually, click the button beside "Use the following settings"

| You can now enter your | | test to choose APN settings owing settings. |
|--|--|--|
| Alternatively select your network from the drop down list of presets | Presets Address User Password | mobile.o2.co.uk mobileweb password |

vi. **Time(s)** Data sent – Here you specify the Call Out requirement for the logger. There are 2 modes available, SMS and UDP. SMS is a one way unacknowledged data transfer service using the common text messaging service. UDP is a true 2 way confirmed data transfer process via the internet over a GPRS connection. Both have advantages, however HWM recommends UDP wherever possible as this offers the most secure method of data transfer.

Switch on the Call out by selecting "On" in the Address selector, then choose 'UDP' or 'SMS' from the Type selector. See below for Mode settings

| Address | Туре | | Mode | Freq hh: | mm |
|---------|------|---|--------|----------|----|
| On 🔻 | UDP | - | Freq - | 00:15 | - |

Fall back 1

÷

Time (a) Data is Cant

Call Addresses – These will usually have been entered at the vii. factory and should not be adjusted, Data Destination however if you have your own data inbound.hwmonline.com Address server, then you can enter either the 23024 Port telephone number for your receiving modem, or the UDP address & port no SMS No. 310000202 for where the logger is to send its data.

The fall back times specified here instruct the 06:00:00 🚖 logger what to do in the event of the primary Call 16:00:00 🚔 Fall back 2 Out requirement not being met. This can be for 2 reasons:-

- a. If a connected external battery goes flat, the logger will default from the normal call out requirement to a 2 times per day routine. The times of these calls are specified by both Fall back 1 & 2.
- b. If a GPRS data call cannot be completed due to nonavailability of a GPRS service, then the logger will try to send an SMS message at the Fall back 1 time.

Now choose your Call out mode, this can be Mode Freg hh:mm either "Freq" for a call made at a regular Freq -00:05 frequency throughout the day or "Time" to specify up to 8 individual times during the day. Frea Enter either the frequency (e.g. $06:00 = every 6^{3}$ Time hours) or the time for the call in the box.

viii. **Alarms** – The Logger has a comprehensive alarm system that you can configure to send out Alarm messages when certain defined conditions are breached and for the Transient logger you will need to use Alarms to define the transient levels from which you want the data to be recorded.

| When an alarm condition is triggered, a new call in | Alarms | | | |
|---|--|---|--|---|
| frequency (i.e.faster) can be specified to allow the observer to gain more up-to-date data during an event. | Call frequency while in alarm | 00:05 | + | |
| Minimum Night Flow – not applicable for Transient logger | MNF Window end hh:mm Flow level units | 06:00 Litres/se | ÷ | v |
| Choose your flow units – not applicable for Transient logger | Alarms sent via SMS | 100454 | 070 | |
| If you want SMS alarm messages to be sent, tick this box and enter an Alarm SMS phone number | Alarm SMS No | +123450 | | |
| Select these alarm conditions if required by ticking the boxes | Enable alarm reset at mid | - | | |
| | Disable alarm dual freque | ncy mode | | |
| There are 8 possible different alarm conditions that can be configured, select each one from the tabs – Note TAB 1 is for Transient alarms Set your persistence or trigger point, e.g. for transients you will want 1 out of 1 in order to pick up every transient – see note below on persistence Choose your type of alarm from the list:- Lower or Upper Limit breach - Enter the alarm threshold – Recommended to use Upper for Transients Minimum Night Flow (MNF) - not applicable for Transients Rate Of Change (ROC) not applicable for Transients Difference (Dif) between channels - not applicable for Transients Either In or Out of Band set by Upper & Lower levels | Cond 1 Cond 2 Cond 3 Cond 4 Co Transant alem conditions Permitence 1 v out of 1 v Cover Upper Upper Difs Difs Difs Difs Difs Not Band | nd 5 Cand (| ē | |
| Note on Persistence: When an alarm is triggered then immediately the threshold is re-crossed ther sent. If there is a period when the alarm threshold i in numerous messages for the same event. By Hysteresis box, you can provide a window that a repeatedly crossed without sending repeated mess limit of 5 and a hysteresis of 1, the alarm will the message will not be sent until the value drops to be 3. Final steps – By default the logger is so (Coordinated Universal Time, equivalent however you can choose either an offset logger to use your PC time. | n a clear messag s borderline, this of specifying a valu allows the thresho sages. e.g. with a trigger at 5, but to low 4. et to UTC to GMT), from this time, o | e will can re ue in old to an Up the c Time | l be sult the be per lear | T |
| 4. When you are happy with all the setting < <setup logger="">> button to program the log</setup> | | Setup L | ogger | |
| Data Communications Confirmation | – GPRS Tes | t | | |
| It is important to confirm that your logger is co server before you leave site (or to be confident, undertake a GPRS test before you leave the log | your office), so yo | | | |

Г

1. Connect an appropriate GPRS antenna to the FME socket on the logger. The location on the logger can vary depending on the configuration of logger ordered, but the picture below illustrates a typical connection.



the following points should be checked before calling HWM support for assistance:-

| Possible Problem | Solution |
|------------------------------|---------------------------------------|
| Network Busy due to | Retry the test after a few |
| excessive traffic. Commonly | minutes. |
| occurs around schools. | |
| GPRS signal not available at | The logger will call into the data |
| your location. Not all Cell | warehouse once per day using |
| masts carry GPRS traffic | an SMS message; relocate the |
| | logger if more frequent |
| | communications is required. |
| Network signal not strong | Relocate the antenna if possible |
| enough. You need a CSQ | or try alternative antenna |
| (reported by the GPRS test) | configurations. Ensure antennas |
| of at least 8 for reliable | are vertically orientated where |
| communications. | possible. See aerial placement |
| | notes section. |
| APN settings incorrect. | The GPRS tester knows about a |
| | large number of cellular networks |
| | and will try as many settings as |
| | possible and correct any error |
| | automatically. |
| | If there is still a failure, then you |
| | need to check with your network |
| | operator that you have the |
| | correct settings for your SIM. |

If you continue to experience problems with communication, you may need to check the network coverage in your location.

Taking a reading from the logger and hardware tests

You are now ready to confirm that the logger is measuring real data from the sensors by taking an Instantaneous Value.

- 1. From the IDT menu bar, click the <<Hardware Test>> tab.
- 2. Click the <<Go>> button to start to check the operation of your installed system.

Go

3. The IDT will now display its measurements for a period of 10 minutes to allow you to diagnose any issues with cabling

| | nbient temperature | 0.000 10.000 | Options Heip | |
|------------|---|--|---|--|
| | mory venage | Setup Data Col | attact Marchwere | Testa Calbration Pressure 1 * * |
| | | 19.90* | C | PC8 Temperature |
| Inc | stantaneous 4-20ma | 7.10 V | | PC8 Votage |
| | | | | |
| va | lue | 5274.3 | 7 | Pressure / 4-20nA |
| - . | | | | |
| | ne until test stops & Manual Stop | | | |
| bu | tton | | | |
| | | | | |
| | | | | |
| Op | en 10m power window button | -See at | 800 | Window |
| | ' | Mod | · Locense | |
| Mc | odem Diagnostics | - Lunit Coo | - | ATLA |
| | 5 | Load Customer F | Re Read | Logger |
| Fo | rce call now – will send in data if | Expand Grou | GPR: | 5 Test |
| the | ere is any available | | | |
| | | | | |
| | When you are ready to stop the test just | t click the | <~Stor | >> button |
| | when you are ready to stop the test jud | | ~~0.01 | button. |
| | for a period of 10 minutes. This allows y send a text message to it to confirm that | • | | |
| 5. | • | it commur | ication | s is still OK. ata in |
| | send a text message to it to confirm that Pressing < <force call="">> forces the log</force> | it commur iger to ser to shift a l nore adva | ication d its da ogger t nced di | s is still OK. ata in o a new site. agnostics to be |
| | send a text message to it to confirm that Pressing < <force call="">> forces the log immediately. Useful for when you wish The <<modem>> button allows some m performed on the modem.</modem></force> | it commur iger to ser to shift a l nore adva | ication d its da ogger t | s is still OK. ata in o a new site. agnostics to be |
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 If you click the <<Data – Collection>> tab you will now see a set of tools for downloading data from your logger for later uploading to the data server. It can also be of assistance for diagnosing problems.

| Setup Data Collection Hardware Diag | |
|--|---------|
| | |
| Download size 🛛 🗕 🖵 🗖 Adjust time to last bo | oundary |
| Download Post files Abort Empty po | stbox |

- a. From the Download size selection, choose how much data you wish to retrieve, from everything the logger has stored to any unsent data since the last time the logger called in.
- b. Click <<Download>> and choose "Archive" when prompted and the data will commence downloading. If you wish to stop the process, click <<Abort>> and the download will cease.
- c. A small chart will now be displayed showing the data downloaded. By using your mouse to draw boxes in the graph area you can zoom into areas of interest. Click the small circles at the end of the drag bars to zoom out. By hovering your mouse over the points on the graph, you will see the exact value recorded.



d. If your logger is in a location where GPRS communication is not possible, you can now upload the data when you are next connected to the internet. Simply click <<Post files>> and all the data you have downloaded to your PC will be uploaded in one go. If you are downloading more than one logger in a route, all data is stored and transmitted together. If you decide that you do not wish to post the data you have downloaded, click the <<Empty postbox>> button to remove the downloaded data from your PC.

Note: Choose the other data types depending on what recordings you wish to retrieve / view.

Note: For Pressure transient logging you will only be able to view the summary graphs for the channels you have set configured. To view the pressure transient detail you would need to download the data into Radwin software

Setting up the Channels in Datagate for a Pressure Transient Logger

In your Datagate account identify the correct logger, double click on it and then select the 'edit channels' button –

| IM Online Culturer Lingue - I | HMH Online Customer Legar | View kogger + B | HWIN DataGale | - | | | | | | - | 0 | 93 |
|--|-----------------------------|-----------------------|----------------|---------------------|--|------------------|----------------|--------------------------------------|-----------|--------|---|----|
| + @ dringen mobilicore it; | web togget here than 2008 | | | | 110 | 2 De Steige | | 2 1 | () () | 4 1 | 0 | 1 |
| act Victord 🛢 Getting Started | | | | | | | | | | | | |
| HWM | DataGate | | | | | | | Carrent Low Access Isse Logout | | admin | | |
| Loggers | View logger | | | | | | | | | | | |
| Loggera | Serial number (| | | | Littlinde. | | 6 | 2010 | | | | |
| Summory All Loppers | Ortagine comber 3 | | | | naturle | | 6 | ¢(d)(| logger | | 2 | |
| Quiet loggers | Hobia number - | ##18e0169e00 | | | 000 ACID 99.0 art. dete: -03-5ep-2t | 54.00.00 | 1 | Edit logge | ir chuis | and in | | |
| Hy Loggers | | -20nA Transport | | | rel date 25-fab-20 | | 1.1 | 200.0000 | er un mit | lico | | |
| Lost loggers Upload loggers | Site id - | 4-20mA Translant | | Rattary : | continue 7.0v | | | | | | | |
| Create a new lugger | | 26-Feb-JDI3 16:58 | 1:29 | Segnal | strangth 17 | | | | | | | |
| stend to loggers | Tertwork 4 | Constant and Constant | | | Verson 2.22 Time FW-138-0 | 201 | | | | | | |
| Logger Types Logger types New logger type | Owned by 4 | | | 19 | alt days 0 | | | | | | | |
| Channel units Channel units New channel unit | Credits Charonals | Accounts A | laim responses | Incoming data | Incoming basit | Outgoing measage | a . | | | | | |
| locounts | Incoming GPRS mess | ages | Inco | ming SMS messa | igen. | Gutgoise | messages | | | à | | |
| Hy Account. Hy Account | Evaluat reaches | | 1.000 | Designt cradits | | - Accessing | | True (topgle) |) | | | |
| Ourge my assessed | Credita Credita used | 191057 | | Credits used | | | Oridis | | | | | |
| All eccounts | 7Aurober received | | | Taurober received | | | Credits used | | | | | |
| All accounts Create new account | Waiting for credits | | | Waiting for chedita | | Wor | ing for medits | | | | | |
| ags | | 12-5-p-2014 13 | 47 | Last message | | Saint | manifage servi | | | | | |
| Massaging logs | Matt after + dava | | | Allert after x days | | | | | | | | |
| Incoming SMG | Add income | ng GPRS chedita | - | Add incom | ng SMS medita | | Add out | going credits | - | | | |
| bicoming GPRS Incoming Alarma | 1000 | Add GPRS create | ta l | 1000 | Add SMS credits |) | 1900 | Add cred | £s. | | | |

For each of the channels that you have configured in the logger enter the correct details for in the fields as follows –

| 🗄 Astagets mebilicien : Synok, odis | nggerthannek bine Progger da b | 154 | | 7 (C) | El - Gauge | P 12 10 1 | |
|--|--------------------------------|-----------------------|-----------|-----------------|-----------------------|-----------|--------------|
| ket Vaibid 👹 Getting Stated | | | | | | | |
| Leggers Summary | Channel 1 | | 6 | annel 3 | | | |
| All Loggers Givet loggers | Number | 1 | Nun | nber | 2 | | |
| My Loppers List kiggers | Name | Pressure Avg | Plan | w. | Pressure Mit | | |
| Ciplicad loggers Creats a new logger | Offset | -3516.24 | off | tet. | -3516.24 | | |
| Send to loggers | Channel type | Pressure (4-20) (psi) | - ch | nnel type | Pressure (4-20) (pal) | | |
| Logger types | Calibration Multiplier | 8.79062 | Cali | bration Molta | Channel na | mo | |
| New logger type Charmel units | Meter read value | | 10ml | er read value | Channel ha | ne | |
| Channel units New cliannel unit | Meter read date | [3 v] 0 v] 2014 v] 0 | - 0 v Met | ur read data | | | |
| Accesses | Analogue Inv value | | Ana | kogase itow va | Offset value | (value f | rom I |
| My Account My Account Change my password | Analogue high value | | 100 | logua tigti v | software) | (| |
| All accounts All accounts Create new account | Channel 3 | | | $\overline{\ }$ | | | |
| togs | Number | 3 | | | Channel typ | e - Pres | sure |
| Meaning logs Incoming SMS | Name | Pressure Has | | | (4-20) psi | | |
| Incoming GPRS | offset | -3516-24 | | | (4-20) psi | | |
| Dubgoing messages | Channel type | Pressure (a-20) (psl) | | | | | |
| Lost messages Lost messages summery | Calibration Multiplier | 8.79062 | | | | | |
| Extended 4PI Other logs | Meter read value | | | | | | |
| FTIP log AP1 log | Meter read date | 10 - 9 - 2014 - 0 | - (0 v) | | | | 12 September |
| | | | | | | | |

Once the data is coming in you will be able to view the graph on HWMOnline.

The data will be displayed as additional traces on the graph for a Sample Frequency setting of Sample Interval. For higher Sample Frequency rates the primary trace on HWMOnline will display a diamond symbol to indicate the point where a transient occurred.



Click the diamond to provide a close up view of the transient



For more advanced manipulation and viewing of transient data you can download the data from Datagate into Radwin. See the following section on how to install and setup Radwin.

Setting up Radwin software

Two things must be done -

1. Set up Radwin to receive data from Datagate

First set up Autocall as follows -In Setup > System configuration > Autocall ports Select a free port (highlight it and then click Edit selected item)

| unt: dvanced ladwin All | | | ets to be used for Autocal Downloads. Select the require processing of SMS Messages is required, but no SMS Me | |
|-------------------------------|------------------|------------------------|---|------|
| R Manual Call R View | Database Syste | en Statup Autocal Po | rt# Autocal Options Autocal OHS Alem/Enor Expo | mina |
| Autocal | Enable Post | Default Boud Rate | Connection Type: | T |
| Data Generator Export | 8 COM1 | 9600 | SMS Modem | |
| Alam Programme | COM2 | 300 | Process SMS Messages from FTP Site | |
| Alam Receiver | COM3 | 300 | Modern | |
| Remote Autocal | COM4 | 300 | DateGate | |
| Remote Alam R | - COMS | 305 | Modern | |
| 1000000000000000 | 45 COM6 | 9600 | Modern | |
| | COM7 | 300 | Modern | |
| | -0 CDM9 | 300 | Modern | |
| | COM9 | 300 | Modern | |
| | COM10 | 2400 | Modern | |
| | COM11 | 19200 | Direct Logger (RS232) | |
| | Contraction (| PARTIE | United | |
| | | | Edit Selected (| ten |

In 'Edit Selected Item' Screen then select 'Datagate' from the connection Type drop down.

| ruble Port | Connection Type: | | Deaphail Fire | |
|---------------------------------|---|-----|---------------|---|
| P COM4 | DataGate | • | 3 300 | - |
| ti Hennya Gre 7 San Sili Lat | Main Frame Modem (ABB AquaMaster S) Paknet Modem (ABB AquaMaster S) Deect Logger (FIS232) (ABB AquaMaster S) | × × | | |
| laGate Configure | lon | | | - |
| alaGale Address | http://doi.ogute.mobil.com/datacole | | | |
| Isenane: | Patemord | | | - |

Click on Enable port (tick the box)

Enter your Datagate account details in Username and Password. (These should have been supplied to you)

Press 'OK'

| System Configuration | Autocall Adv | vanced | | | |
|---|--------------|--------------------------------|--|----------------|---|
| Configure Advanced Radvim All Manual Cal | enable it ar | nd specify its function. If pr | I to be used for Autocall Downloads. Select the i oceasing of SMS Messagers is required, but no S | MŠ Modernia | |
| A View | | | Autocal Options Autocal OHS Alem/En | or baporting [| - |
| Data Generator | Ensible Port | Default Boud Rate 9600 | Connection Type: SMS Modern | 100 | 1 |
| Alam Programme | COM2 | 300 | Process SMS Messages from FTP Site | | |
| Alam Becelum | CHICO TO | 300 | Modern | | |
| Benote Autoca | | 300 | DataGate | | f |
| 🚮 Remote Alam R | COME | 9600 | Modern | | |
| 1.11. | COMO | 300 | Modern | | |
| | COM9 | 300 | Modern | | |
| | COM9 | 300 | Modern | | |
| | COM10 | 2400 | Modem | | |
| | COM11 | 19200 | Direct Logger (PS232) | | 1 |

2. Set up the loggers in the Database (if they are not already there).

In Set up > Options > Item configuration you should now see your logger database as below.

| Locations Stress Locations 🔗 Function Sale 🏠 Lookup Tables 🏠 Data Managari | | 1000 |
|---|----|--------|
| | | E . * |
| ⇒ Collection/cm. Disconnents/Documents/Custame: Service/Hacounite Detection (Dec. 10) ⇒ Constructions ⇒ Applications | | |
| | | |
| | | |
| | | |
| | OK | Cancel |

If your logger details are not here then you need to enter your logger details as follows.

You may need to add a new Zone (or you can add your logger to an existing Zone.)

To enter a new zone –

Click on the 'Hammer & Sickle' icon (see screen shot above) Then select 'Create New Zone' to reveal this screen shot

| | e required identity and name for the Zone. If e already exists it will get updated. |
|-------------------|--|
| Zone Identity: | 014 |
| hane: | MAR TOT |

Enter your Zone I/D and Name and then 'Save'.

You should now see the new Zone in the list as below.



Highlight the new Zone and select the 'Hammer and Sickle' Icon again This time select 'Create New Location'

You should now see this screen (below)

| Configure: | Location - Specify the location identity and name. Enter names for each of the logger channels. |
|---|---|
| Radwin All Remote Alarm Ri | Location logger Statistics Transducer Unit/Levels Meter Autocali Memo Auto Database E |
| | Channel Name |
| | A 01 A 02 A 03 A 04 |

First select the Location Tab - enter your location description (numerical and alphanumeric descriptions)

Then select the 'Logger' tab -

| | Location Configu | rationOS_22 : Radwin All |
|---|---|---|
| Configure: Basic Radwin All Wiew Call | communicate with the logg | type and baud rate. Select the connection type (how the computer will r), and enter telephone numbers if required. The logger manufacture insducer Unit/Levels Meter Autocall Memo Auto Database E Baud: 11/01/1970 Serial: 41351 11/01/1970 Last Known Logger Configuration |
| | Connection Connection Type: G5M Data Number: SMS Voice Number: | GPRS +61409658277 |
| | | Print Save Cancel |

Fill in the logger details as accurately as possible.

Logger type from the drop down – Note : For Pressure Transient Logger the type is 'Other Logger'

Baud rate is automatically set

Serial number can be entered – it is found on the logger label **Connection type** – select GPRS from the drop down

SMS Voice number – be sure to enter the correct logger phone number in international format (+44 drop the zero- OR for international numbers ensure it is exactly the same as the number in Datagate) DOUBLE CHECK THIS NUMBER IS CORRECT

| | Location Configuration | nOS_23 : Radv | win All |
|---|---|--------------------------------------|---|
| Configure: Basic Radwin All Manual Call Wiew Autocall Data Generator Karr Programm Alarm Receiver Remote Autocall Remote Alarm Re | each recording channel in order to Location Logger Statistics Transduce | o calibrate the download annel 01 | el. Transducers Must be configured for aded data. Select 'Configure' or double r Autocall Memo Auto Database E -400.000000 Configure |

Select 4-20mA for the transducer type then select Configure -

| 4-20mA Transducer | × |
|--|----|
| Select the units Sensor type. This defines the type of units that can be applied to the data. Select a stored transducer from the list, or select user | \$ |
| Sensor Type: Pressure | |
| Transducer | |
| Select: User Defined Transducer Remove | |
| Enter/Edit Transducer | - |
| Name: | |
| Full Scale Deflection (20mA) Value: | |
| 20000.000 PSI | |
| Zero Scale Deflection (4mA) Value: | |
| 0.000000 PSI | |
| Data Type: All Data Values 💌 | |
| Add to Select Transducer List Bands | |
| Export OK Cancel | |

Select PSI and enter the 4mA and 20mA values (as above)

Note when you select 'OK' to accept this the FSD 20mA value appears different in the below screen –it is OK – note the Cal and offset values are correct.

Remember now to repeat this process for the other channels you have set up by selecting each channel from the drop down.

| | Location Configuration _OS_23 : Radwin All |
|--|---|
| Configure: Basic Radwin All Manual Call View Autocall Data Generator Export Alarm Programm Alarm Receiver Remote Autocall Remote Alarm Re | Transducer - Select the transducer type for each channel. Transducers Must be configured for each recording channel in order to calibrate the downloaded data. Select 'Configure' or double Location Logger Statistics Transducer Unit/Levels Meter Autocall Memo Auto Database E Channel: Channel: Data Factors Calibration: 8.790819 Offset: -3516.327637 Apply Logger Calibration Configuration Transducer Type 4-20 mA Configure Sensor Type: Fransducer Name: Full Scale Deflection (20mA) Value: 14065.310547 Data Type: All Data Values |
| | Print Save Cancel |

Once the channel configuration is completed select 'Save'

| Update Existing Location | | | | | |
|--|--|--|--|--|--|
| Select OK To Update the Existing Location :OS_22 | | | | | |
| OK Cancel | | | | | |

Select 'OK' to complete the logger configuration in Radwin software

Repeat this process for each of your loggers.

Downloading data from Datagate to Radwin

Because of the size of the data to be downloaded from Datagate we would advise you to run Autocall all the time on your PC so that Radwin is constantly downloading and updating the data in its database

Start Autocall

This will process all the available data messages from Datagate relating to your loggers.

| 😫 File Options Configu | Radwin Autocall V4.67.1 - Computer 1 (C5My vision Start Help | Documents/Lustamer: | Services\ECM\ECM DATA Jan14) - 🔍 🚾 |
|---------------------------|--|---------------------|---|
| 3 😰 🏘 | | | |
| & Coronal | SHS Maders | | Autocall |
| 2 Unida | To Open Connel - Port does not east or USB has been unplugged. | | |
| Port10 | DataBare (http://datagate.nobili.com/data . | | Topics [Search Results] |
| Dalagate Process | ing FTP2: 654 447568124753 | Abort | Introduction : |
| &Connil4 | SME To DateEate | | Getting Stated Configuring Autocall Comm Pots |
| 2 Unable | To Open Convol 4 - Post does not exist in USB has been unplugged | | Configuring Loggers for Autocell Download Scheduled Calling |
| | | | Introduction Autocal I is the automatic data download package of Radiog For Windows. It may be configured to use up to 32 comm ports, providing pacialle download capability of Radicam data loggers. It exeports Direct, PRTM Modum, Salt Modern, Mol Modern, and Platnet Modern connection types. |
| | | | Getting Started in order for Autocali to communicate, Com |

Once the data is constantly downloading and updating the Radwin database you can view it as follows –

From the View screen select the 'Open Data file' icon -



Find the correct logger in the data base and click on the '+' sign to reveal the data files –

| Data File 🎒 Data Time Perio | 6 Function Sets | | |
|-----------------------------|---------------------------|--|------|
| C:\radwin\SmartLog | | 💽 🛛 🗶 🛍 🗉 | 1. 2 |
| M1811 07/10/2014 | (06/10/2014-09:50:33) : | and the second sec | |
| - M1812 07/10/2014 | (06/10/2014-09:51:06) : | | |
| M1813 07/10/2014 | {06/10/2014-14:23:11} : | | |
| - M1814 07/10/2014 | (06/10/2014-14:23:44) : | | |
| - M1815 07/10/2014 | {06/10/2014-14:24:17} : | | |
| M1816 07/10/2014 | (06/10/2014-14:25:33) : | | |
| M1817 07/10/2014 | (06/10/2014-14:26:06) : | | |
| - 5 M1818 07/10/2014 | (06/10/2014-14:26:39) : | | |
| M1819 07/10/2014 | {06/10/2014-14:27:45} : | | |
| - 5 M1820 07/10/2014 | {06/10/2014-14:28:51} : | | |
| M1821 07/10/2014 | {06/10/2014-14:29:24} : | | |
| - 1822 07/10/2014 | (06/10/2014-14:29:58) : | | |
| - 1823 07/10/2014 | {06/10/2014-14:31:22} : | | |
| - 10 M1824 07/10/2014 | (06/10/2014-14:31:55) : | | |
| - M1825 07/10/2014 | {06/10/2014-14:32:28} : | | |
| - K M1826 07/10/2014 | {06/10/2014-14:36:31} : | | |
| - M1827 07/10/2014 | {06/10/2014-14:37:37} : | | |
| - M1828 07/10/2014 | (06/10/2014-14:38:10) : | | |
| - K M1829 07/10/2014 | (06/10/2014-14:38:45) : | | |
| M1830 07/10/2014 | (06/10/2014-14:40:35) : | | |
| M1831 07/10/2014 | (06/10/2014-14:41:09) : | | |
| | {06/10/2014-14:41:42} : | | |
| | (06/10/2014-14:42:15) : | | |
| | (06/10/2014-14:42:48) : | | |
| | {06/10/2014-14:43:54} : | | |
| | (30/09/2014-02/10/2014) 1 | | |
| | {02/10/2014-07/10/2014} : | | |
| 🗊 🍪 SSST : | | | |
| 🖹 🍪 SW01 : Iridium | | | |

'A' Files are normal logging (non transient) archive files which are appended at every Autocall download; whereas 'M' Files are the transient files, as they are separate events that do not get appended to.



Note - 'A' Files cover a period between two dates, whereas Transient 'M' files are denoted by the date and time allowing easy access to the main transient events that you might want to investigate in detail.

Double click on the data file with the time and date of the transient you want to look at and select 'OK' at the following screen -

| | | Lowd Data File | | |
|-----------------|---|---|-------------------------------------|-------------------------------------|
| Select a | i deta cherriel, ir i ifi ehould be upda | el data charrada, to ver tad otherwiner renir data | s. Salect Truble a added to Fw a | Live Updets' if a elected data 🖕 |
| (deritty | | | | |
| Dove | _06 | Olets Mid | | |
| Location | ACCES | | | |
| F#I | BUDDA | | | |
| Channel: | Al Channels | 1 | | Advanced > |
| | | | | |
| | | | | |
| | | | | |
| F Load Stored 7 | iext | | | |
| Enable Live Lt | state | | CK. | Caricel |

This will launch the Radwin View Graph which can be manipulated to view the pressure transients in detail using the normal View features and controls -



Note- If you configured your logger as per the suggestions in this guide you will have three graph lines – Average, Max and Min values. The Max and Min graphs can be expanded to allow detailed investigation of the poasitve and negative transients.

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MAN-143-003-B (GPRS 4-20mA Transient Logger).docx